*Statement Norms for opening post offices:* 1. Norms **for** opening Extra Departmental Branch Post Offices:

1.1 **Population:**

(a) **In the normal areas:**

3000 population in a group of villages (including the PPO village).

(b) **In** hilly, tribal, desert and inaccessible areas:

500 population in an individual village or 1000 population in group of villages.

1.2 **Distance:**

(a) **In normal areas:**

The minimum distance from the nearest existing post office will be 3 Kms.

**(b) In hilly, tribal, desert and inaccessible areas:**

The distance limit will be the same as above except that in Hilly Areas, the minimum distance limit can be relaxed by the Directorate in cases where such relaxation is warranted by special circumstances which should be clearly explained while submitting a proposal.

**1.3 Anticipated Income:**

**(a) In normal areas:**

The minimum anticipated revenue will be $33^{1}/_{3}$% of the cost.

**(b) In hilly, tribal, desert and inaccessible areas:**

The minimum anticipated income will be 15% of the cost.

**Development of technology in wireless sectors**

926. SHRI RAMA MUNI REDDY SIRIGIREDDY: Will the Minister of COMMUNICATIONS AND INFORMATION TECHNOLOGY be pleased to state:

(a) the steps being taken to develop technology in wireless sector to spread net connectivity;

(b) whether any joint research is being carried out for providing newer services; and

(c) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (DR. SHAKEEL AHMAD): (a) Centre for Development of Telematics (C-Dot), an autonomous society under the Department of Telecommunications, is developing wireless access technology, including net connectivity, especially for rural subscribers. In addition, Department of Information Technology has initiated development programmes in wireless sector to spread Internet connectivity with participation from Indian Institutes of Technology, (Kanpur and Chennai), Indian Institutes of Information Technology, Hyderabad and University of Pune.

Indoor use of low power W-LAN equipment has been exempted from licensing to encourage growth of these services as well as possible future development of such technologies. Also, certain frequency bands have been allocated for preferential treatment of indigenous technologies like CORDECT etc.

(b) Yes, Sir.

(c) Details are given in the Statement.

***Statement***

*Details of Steps Taken by Government Regarding Joint Research for providing newer services for Internet*

1. **Supporting development of next Generation of wireless (4G) Technology at the Centre of Excellence in Wireless Technology (CEWIT) at Chennai.**

CEWIT has been registered as an autonomous society with seed efforts of Indian Institute of Technology (IIT), Chennai in partnership with Industry, and part grants from Media Lab Asia, a Section 25 Company set up by the Department of Information Technology (DIT). The Centre will carry out development work over a phased programme as per the needs identified. The Centre will also establish linkages with academla, industrial R&D teams, and telecom/Internet service providers.

■ The Long-term goal (5 years) of the Centre is the generation of several Intellectual Property Rights (IPRs) and their inclusion in the 4G international wirless standard. By active participation in evolving the standard, the centre will ensure that the standard meets specific Indian market needs as well, and give first-mover advantage to Indian companies. Indian companies will be able to make 4G products (subscriber terminals, base station equipment, software stacks and reference designs) and bring to market, some of them in partnership with international players. Indian operators will also be able to drive new applications using 4G technology, including broadband services.

■ An Intermediate goal of the Centre is to identify sate-of-the-art wireless technogies (*e.g.* WLAN-3G or 3.5 integration, or Institute of Electrical and Electronic Engineers (IEEE) 802.16) which can be brought to market sooner, and provide intermediate solutions to telecom/internet operators to meet some of the requirements of the 4G system.

2. **Developments supported in Wireless Local Area Network (LAN Technology at Various academic and R&D Institutions).**

DIT has supported development projects on wireless access technologies at Indian Institute of Information Technology (HIT), Hyderabad and University of Pune. The details are as follows:

(i) **Applied research in broadband wireless access technologies and deployment of wireless network at HIT,. Hyderabad.**

Obejective of the project is as follows.

■ Design and deploy the wireless network, based on IEEE 802.11g technology, in the campus, evaluate and analyze the network protocols for its suitability for wide scale deployment in non-campus scenarious, and provide network management and security to ensure reliable and secure connectivity.

■ Make a comparison of relative performance in terms of range, Signal to Noise ratio, Security and Quality of Service (QoS) between the various IEEE 802.11X protocols and also the effective bandwidth attainable in real environments.

■ Conduct studies on the use of directional antennas and multi beam systems for enhancing the range as well as their agility in multi-sensor *ad-hoc* network environments.

■ The project is progressing well.

(ii) State-of-Art **Hybrid Network Infrastructure and Secure Management Centre at Pune University**

A State-of-Art Network Infrastructure and Secure Net work Management facility is being set up at University of pune as a step to towards creating expertise in a critical area of network Security.

The project envisages setting up of network management centre, Hybrid Network of Optical Fibre Cable (OFC) and wireless LAN using latest products like IEEE 802 11b to be upgraded with higher bandwidth of 54 Mbps of 802.11g. It also trains the personnel from Government/ Academia and Industry in this area.

The hybrid network has been set up, and work on secure **network** management is in progress.

3. **Centre for Development of Telematics (C-DoT)**

C-DoT is exploring possibility of undertaking joint research both with national and international development organisation. The partners are being identified for new technologies.

**4. Development in the wireless area sponsored by Media Lab Asia.**

DIT has set up Media Lab Asia as a not for profit Section 25 Company. The objective of Media Lab Asia is to research, develop and deploy technologies for the benefit of common man.

One of the research themes of media Lab Asia is development of wireless technology to provide rural connectivity. The following research projects have been funded by Media Lab Asia in this area:

(i) **Digital Gangetlc Plain**

The project at IIT Kanpur aims to evaluate the technical feasibility of communicating over a long distance using IEEE 802.11b technologies and establish a multi-hop directional link between Kanpur and Lucknow. A 4-hop and a 2-hop link has been successfully established between IIT Kanpur and Rajajipuram, Lucknow. It offers opportunity to deploy such networks in villages.

(ii) **Peer to Peer 802.11b based Mesh Network**

The project at IIT Chennai aims at setting up an 802.11b based mesh network for connecting rural areas to provide high bandwidth connectivity at a low cost. The challenge is to design a peer-to-peer 802.11b based mesh network and deploy it in a scalable way. The design emphasizes on (i) Mesh Networking (ii) Effective Antenna and Base-band Systems tailored for typical inter-village distances in India (iii) High Availability of Communications (iv) Security of Routing

**Telephone Density in urban and rural areas of Tamil Nadu**

927. SHRI S.P.M. SYED KHAN: Will the Minister of COMMUNICATIONS AND INFORMATION TECHNOLOGY be pleased to state:

(a) the average telephone connection per family in urban and rural settlements in Tamil Nadu;

(b) the details regarding the rural settlements in Tamil Nadu which do not have telephone facility; and

(c) the targets for providing telephone facility in the rural/urban areas of Tamil Nadu for the years 2003-04 and 2004-05?

THE MINISTER OF STATE IN THE MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (DR. SHAKEEL AHMAD): (a) The average telephone connections provided by BSNL per 100 population (Teledensity) of urban and rural settlements in Tamil Nadu as on 30-06-2004 is given below:

| Name of State | Teledensity | |
|---|---|---|
| | Rural | Urban |
| Tamil Nadu | 2.20 | 10.93 |

(b) BSNL has provided telephones facilities in all revenue villages (as per 1991 census) in Tamil Nadu Circle.